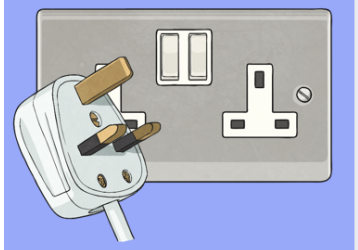
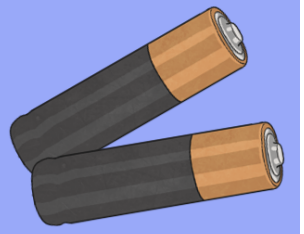
Science: Electricity.

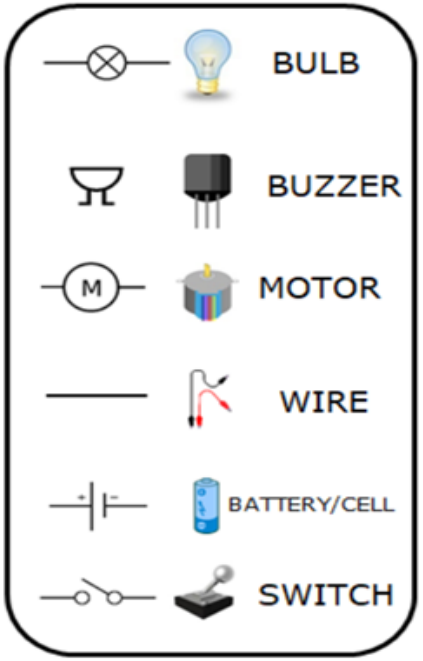
There are two types of electrical current that we use to power appliances:



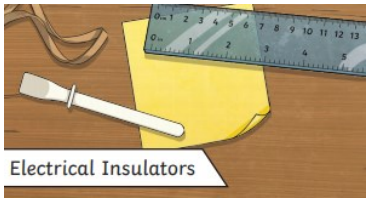
Mains electricity: which is an **alternating current (AC).**



Batteries: which generate a **direct current (DC).**



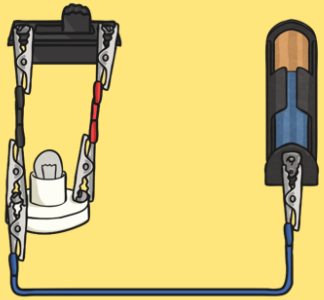
Renewable	Non-renewable
Solar Nuclear Geothermal Hydro Wind	Fossil fuels


Electrical Insulators

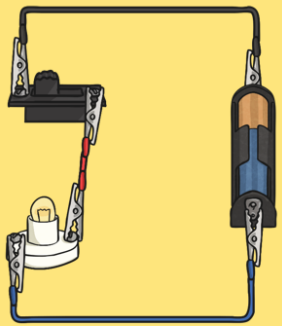

Electrical Conductors

An electrical circuit can be complete or incomplete.

Incomplete Circuit



Complete Circuit



Where Does Electricity Come From?

Fossil Fuels

Coal, oil and natural gas are fossil fuels. Burning them produces heat, which generates electricity.

Nuclear

This is the energy that is created when atoms are either combined or split, creating heat. This can be converted into electricity.

Hydro and Wind

Water is used in dams, and wind is used to turn windmills. These both generate electricity.

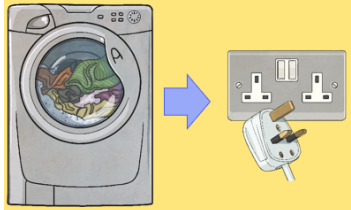
Solar

The sun's rays shine on special panels, which convert its energy into electricity.

Geothermal

Geothermal energy is heat from the Earth, which can be converted into electricity.

Mains Electricity



To use this type of electricity, you need to plug the appliance into a socket.

Battery Electricity

To use this type of electricity, you need to insert a battery into the appliance.

Vocabulary:

Electricity—A form of energy that can give things the ability to move and work.
Renewable—A resource which can be used repeatedly because it is replaced naturally.
Non-renewable—Resources that we use faster than they form.
Complete circuit—There must be wires connected to both the positive and negative ends of the power supply.
Incomplete circuit—If a circuit has gaps, then it is considered an incomplete circuit, and no electricity will flow through it.
Conductor—A material that electricity can pass through easily.
Insulator— A material which does not easily allow electricity to pass through it.